Horticulture Series 433

January 1976

SWEET CORN VARIETY TRIALS, 1975
Green Springs

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Wooster, Ohio

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Twenty-four sweet corn varieties and four advanced breeding selections were evaluated at the Green Springs Crops Research Unit in 1975. Entries varied from 67 to 98 days to maturity and represented a broad range in yield and performance potential.

Cultural and pest control methods followed commercially recommended practices. The soil type used was a fertile sandy loam of medium drainage. Prior to planting, 465 lbs. per acre of 6-24-24 was broadcast and incorporated. Rows were then marked on 30-inch centers and an additional 160 lbs. per acre of 6-24-12 was banded using a commercial field planter. Plots were planted by hand jabber on May 14. Three to four kernels were placed in hills 18 inches apart and approximately 2 inches to the side of the fertilizer band. Individual plots were single rows 32 feet long. Each variety was replicated four times. Guard rows containing representative varieties from different maturity classifications were planted around the plots to assure adequate pollination.

Weeds were controlled satisfactorily by a combination of mechanical cultivation and 3 quarts of Lasso per acre applied at planting. Diazinon was incorporated into the soil prior to planting @3 quarts per acre for control of white grubs and other soil insects. Foliar insects and diseases were controlled by the timely use of Sevin and Diazinon and Maneb. Disease and insects were controlled to the point that data could not be obtained for these variables. However, aphids were troublesome on some varieties including Comanche and Gold Cup.

The planting was not irrigated and suffered slightly from drought as indicated by poor tip and ear fill. Total rainfall in June and July was approximately 40 percent of normal.

Plots were thinned to 2 plants per hill on June 9 for an approximate acre basis stand of 23,000 plants. On June 12 when plants were 10 to 12 inches tall an additional 35 lbs. per acre of nitrogen was side-dressed as ammonium nitrate. The first harvest occurred on July 15; thereafter harvests were scheduled every 3 to 4 days until the final harvest on September 4. Plots were harvested once at average peak maturity and stripped of all remaining ears a few days later to determine total yield.

At harvest, ears were counted, weighed and examined for tip cover. Ten typical ears were then husked, measured for length and diameter and rated for uniformity and overall appearance.

Seed Sources

Seed was obtained from the following sources:

A-1 Agway, Inc., Buffalo, N. Y. 14240
A-2 Asgrow Seed Co., Orange, Conn. 06477
F-1 Ferry-Morse Seed Co., Mountain View, Ca. 94042
L-1 Letherman's, Inc., Canton, Ohio 44702
N-1 Niagara, FMC Corp., Modesto, Ca. 95618
N-2 Northrup-King & Co., Minneapolis, Minn. 55413
R-1 Robson Quality Seeds (Seedway, Inc.), Inc., Hall, N. Y. 14463
R-2 Rogers Brothers Co., Idaho Falls, Idaho 83401
T-1 Otis S. Twilley Seed Co., Salisbury, Md. 21801

RESULTS AND DISCUSSION

Results of the 1975 trial are summarized in Table 1. Since several entries evaluated in 1975 were also tested at Green Springs in previous years, yields are summarized in Table 2 for all varieties tested in replicated plots from 1972 to 1974. Yields should be compared only within a given year and not between years.

Early Entries (65-70 days).--Early-maturing entries performed well in 1975 (Table 1). With the exception of Royal Crest, quality was good. Royal Crest showed consistently poor tip fill compared to the other early varieties; Royal Crest has not yielded well in previous tests (Table 2). Sundance, an early

yellow widely grown in Ohio, significantly out yielded Spring Gold with 7.8 compared to 6.0 tons per acre of marketable corn. Yields did not differ significantly among the remaining varieties. Sundance ears were relatively large for early-season corn, but tended to be somewhat variable in length and uniformity.

Sprite, the only bicolored entry among the early varieties, produced good yields of high quality ears as in past trials (Tables 1 and 2). A fair percentage of the ears tended to have double tips but this did not appear to detract noticeably from the general appearance. Earliking yielded 7.3 tons per acre despite being slightly immature at harvest. Earliking was harvested 4 days earlier than any of the other entries in 1975 and appeared to be the earliest-maturing entry.

Medium Early Entries (71-80 days).--Several of the mid-season entries were impressive. One of the most impressive in 1975 was Bellringer which significantly outyielded all entries in this maturity classification with 10.3 tons. Ears of Bellringer were unusually attractive with dark green husks and good flagging; further, the ears tended to snap from the stalk easily. The bicolored entry Harmony yielded 8.3 tons. Ears of Harmony were generally of satisfactory quality; however, this entry produced the lowest percentage of marketable ears among the midseason cultivars. Tip cover was relatively poor in comparison to other varieties. Butter and Sugar produced lowest yields among the midseason group in both 1975 and 1974 (Tables 1 and 2) and also showed poor ear uniformity and a wide range in maturity. Based on yield in 1974 and 1974 (Tables 1 and 2) Butter and Sugar and Yukon held little promise. Bonanza and Fanfare held promise from a yield standpoint. Fanfare may have suffered relatively more from drought than other entries as indicated by very poor tip fill; tip cover was also poor.

MidSeason Entries (81-85 days).--An experimental, NCX 2004, led in yield in this maturity group with 9.3 tons; yields were statistically significantly higher

than Exp. 2583 and J.L. 49. Ears of NCX 2004 were long and relatively thin but attractive. Apache produced good yields at 8.4 tons; although ears were slightly immature at harvest, overall appearance was excellent. Exp. 2583 was not promising in 1975. Yields were low and ear uniformity was poor. Gold Cup performed well in 1975 as in past years (Tables 1 and 2).

Late Entries (over 85 days).--Capitan led in yield among the late varieties, followed closely by Silver Queen. Ears of Silver Queen were not uniform, but varied widely in maturity; quality was satisfactory otherise. Seneca Chief was not promising in 1975 in that yields were only mediocre and ears were small and poorly filled. Bi-Queen ears tended to have better tip fill and to be more attractive than Sweet Sue in 1975. Sweet Sue produced well in 1974 (Table 2).

TABLE 1.--Average yield, ear size and general characteristics of sweet corn varieties, Green Springs Trial, 1975.

Variety[1]	Source	Days[5] to Harvest	Mkt. Yield/A Tons	Doz.	%	Tip[2] Fill	Tip[3] Cover	Avg.Ear Wt.lbs. Un-Husked	Ave. Ear Size (Husked) Lgt. in.	Dia. in.	Ear[4] Uni-formity	Comments
						EARLY						
Sprite	H-1	67	6.5	1718	90	2.8	3.0	0.63	7.2	1.7	2.7	Bi-colored. Good tip fill. Some double tips.
Sundance	H-1	69	7.8	1948	95	2.8	3.0	0.67	7.4	1.7	2.1	Variable ear length. Pop. early variety
Earliking	N-2	70	7.3	2044	89	-	2.5	0.60	7.1	1.7	2.5	Immature. Widely grown.
Royal Crest	N-2	70	6.4	1960	89	2.7	3.0	0.54	6.5	1.7	2.2	Poor tip fill.
Spring Gold	H-1	70	6.0	1754	89	2.7	3.0	0.57	7.1	1.7	2.8	Light yellow. Good tip fill.
						MEDIUM EARLY						
Harmony	H-1	74	8.3	1706	87	2.6	2.2	0.81	7.5	1.8	2.3	Bi-color.Immature.Thick husk.
Sugar Daddy	F-1	74	7.4	1815	94	2.0	1.9	0.68	8.7	1.7	2.9	Long, pointed tip. Poor tip fill.
Comanche	A-2	74	6.9	1766	94	2.8	2.2	0.65	7.9	1.7	2.6	Aphids, uneven butt fill.
Yukon	N-2	77	6.0	1536	95	2.4	2.2	0.66	9.3	1.7	2.7	Not bad. Some tip voids.
Bonanza	T-1	79	9.5	1863	95	2.7	2.8	0.75	8.4	1.9	2.4	Thick husk.
Butter & Sugar	A-1	79	6.0	1645	88	2.5	2.8	0.60	7.1	1.7	2.2	Bi-color. Variable maturity.
Fanfare	R-2	79	8.2	1742	94	1.5	1.5	0.78	8.1	2.0	2.3	Poor tip cover. Poor fill. Maybe promising with adequate moisture
Bellringer	H-1	79	10.3	2020	97	2.5	3.0	0.85	7.4	1.8	2.5	Very promising! Dark green husks. Good flagging. Snaps easily. Long shank.
						MIDSEASON						
Gold Cup	H-1	81	8.5	2117	95	3.0	3.0	0.67	7.2	1.7	2.9	Good qualit.Aphids.Few rows.
Merit	A-2	83	8.3	1778	94	2.0	3.0	0.78	8.0	1.9	2.0	Light color.Hard to pull. Large No. rows.

TABLE 1.--Average yield, ear size and general characteristics of sweet corn varieties, Green Springs Trial, 1975.(cont.)

Variety (1)	Source	Days (5) to Harvest	Mkt. Yield/A Tons	Doz.	%	Tip (2) Fill	Tip (3) Cover	Avg.Ear Wt.lbs. un-Husked	Ave. Ear Size (Husked) Lgt. in.	Dia. in.	Ear (4) Uni-formity	Comments
						MIDSEASON						
Seneca Star	R-1	85	8.4	1911	93	2.5	2.0	0.73	7.9	1.7	2.2	Uneven tip fill. Large kernels.
Apache	L-1	85	8.7	2105	94	2.8	3.0	0.69	7.2	1.7	2.8	Immature.Very att. Straight rows.
Exp. 2583	N-2	85	6.5	1476	95	1.0	2.0	0.72	8.7	1.7	1.5	Poor tip cover. Long,thin. Poor tip fill.
J.L. 49	H-1	85	7.1	1754	95	2.3	3.0	0.68	8.1	1.6	3.0	Long,narrow. Long shank. Flat-topped kernels.
NCX 2004	N-1	85	9.3	1863	96	2.9	3.0	0.83	8.4	1.8	2.8	Promising!! Long, thin, attractive. Sweet.
						LATE						
Winter Market	F-1	86	7.6	1718	95	2.6	1.7	0.74	8.5	1.8	2.5	Pale yellow. Pointed ears.
RXP 199	R-1	87	8.6	2250	89	2.3	1.8	0.63	8.0	1.6	2.5	Dark yellow. Long kernels.
Style Pak	F-1	87	7.7	1645	91	2.8	3.0	0.77	8.0	1.8	2.7	Attractive. Small kernels.
Capitan	A-2	87	9.9	2165	96	2.6	3.0	0.76	8.3	1.7	2.8	
Bi-Queen	R-2	87	8.7	2081	96	2.4	2.5	0.69	7.9	1.8	2.6	Bi-color. Attractive ears.
Sweet Sue	H-1	87	7.5	1706	94	2.0	3.0	0.72	7.6	1.8	2.8	Bi-color. Poor tip fill. Uniform ears.
Silver Queen	R-2	90	9.8	2069	90	2.5	2.0	0.80	7.7	1.8	1.9	Uneven maturity. Not for mech. harvest. White
Seneca Chief	R-1	98	7.9	2165	98	2.6	3.0	0.60	7.9	1.6	2.8	Small ears. Poor fill.
LSD. .05			1.7	357	6.24			0.06	0.3	0.1		

(1) Cultivars ranked by days to first harvest and yield in tons per acre of marketable ears.
(2) 1 = poor; 3 = excellent.
(3) A rating of 1 indicates exposed tips; 3 indicates at least 1-inch husk overlap.
(4) General appearance of ears; 1 = poor; 3 = excellent.
(5) As indicated by the source

TABLE 2.--U.S. No. 1 Yields in Tons per Acre. Green Springs Sweet Corn Trials. 1972-1975

Cultivar[1]	1975	1974	1973	1972
	EARLY AND MEDIUM EARLY			
Sprite	6.49	4.38	----[2]	5.47
Sundance	7.80	4.29	6.89	----
Earliking	7.34	----	6.15	----
Royal Crest	6.37	1.59	4.59	----
Spring Gold	5.99	3.52	5.38	4.13
Harmony	8.30	6.33	----	----
Sugar Daddy	7.42	----	----	----
Comanche	6.85	----	----	----
Yukon	6.00	3.80	6.26	----
Bonanza	8.51	----	10.58	----
Butter & Sugar	5.97	1.96	----	----
Fanfare	8.17	----	----	----
Bellringer	10.28	6.02	----	----
Golden Earlipak	----	3.32	----	----
Golden Sensation	----	3.64	----	----
F. M. Cross Rapid Pak	----	4.50	----	----
Polarvee	----	----	1.80	----
Morning Sun	----	----	7.19	----
Seneca 60-11	----	----	5.44	2.83
Silver Sweet	----	----	----	1.96
Tastyvee	----	----	----	4.74
	MIDSEASON			
Gold Cup	8.59	6.40	7.99	----
Merit	8.34	----	8.93	8.03
Seneca Star	8.38	4.55	6.74	----
Apache	8.73	6.54	----	----
Exp. 2583	6.45	----	----	----
J.L. 49	7.14	----	----	----
NCX 2004	9.31	----	----	----
Silver Sensation	----	7.14	8.70	7.97
Preview	----	4.98	----	----
Tri-Gold	----	5.84	----	----
Triumphant	----	5.65	----	----
Tendersweet	----	4.83	----	----
Grand Master	----	4.65	----	----
Bravo	----	----	5.58	5.05
Goldenrod	----	----	8.75	----
Northern Belle L.	----	----	8.26	6.31
Goldie	----	----	7.83	----
Top Style	----	----	7.64	----
Gold Crown	----	----	10.83	----
Gold Winner	----	----	7.49	4.99
NK-199	----	----	----	5.41
Seneca Scout	----	----	7.11	----

TABLE 2.--U.S. No. 1 Yields in Tons per Acre. Green Springs Sweet Corn Trials. 1972-1975 (cont.)

Cultivar	1975	1974	1973	1972
		LATE		
Winter Market	7.62	----	----	----
RXP 199	8.56	----	----	----
Style Pak	7.68	----	----	7.53
Capitan	9.93	6.97	----	----
Bi-Queen	8.66	----	----	----
Sweet Sue	7.45	7.52	----	----
Silver Queen	9.84	6.87	8.25	8.13
Seneca Chief	7.86	----	----	7.39
Silver 'n Gold Sensation	----	4.92	----	----
Moonglow	----	7.62	----	----
Comander	----	6.94	----	----
Glacier	----	5.47	----	----
Golden Slipper	----	----	10.00	8.04
Midway	----	----	9.56	8.90
Golden Queen	----	----	8.47	7.82
Honey Cross	----	----	8.46	5.76
Longchief 65	----	----	----	7.57
Ellini Extra Sweet	----	----	----	3.26
Victory Golden	----	----	8.59	7.27

1. Seasonal classifications are only approximate and are based primarily on performance at Green Springs.

2. Not tested in indicated year.

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